

WHAT IS CLAIMED IS:

1. A power rate enhancement circuit for a power amplifier in a dual mode mobile phone including an RF (Radio Frequency) power amplifier for amplifying an RF input signal, a duplexer connected to an antenna, and an isolator connected to the duplexer, the circuit comprising:

5 a CDMA (Code Division Multiple Access) matching circuit connected to an output end of the RF power amplifier, for matching an output impedance of the RF power amplifier in a CDMA mode of operation;

10 an AMPS (Advanced Mobile Phone Service) matching circuit connected to the output end of the RF power amplifier, for matching the output impedance of the RF power amplifier in an AMPS mode of operation; and

15 an RF switch for selecting one of the CDMA matching circuit or the AMPS matching circuit, according to a mode control signal.

2. The power rate enhancement circuit as claimed in claim 1, wherein the CDMA matching circuit comprises an inductor connected between the output end of the RF power amplifier and an isolator.

20 3. The power rate enhancement circuit as claimed in claim 2, wherein the AMPS matching circuit comprises a capacitor connected between the RF switch and a contact point formed between the inductor and the isolator.

25 4. The power rate enhancement circuit as claimed in claim 1, wherein the RF switch is a mechanical switch.

30 5. The power rate enhancement circuit as claimed in claim 1, wherein the RF switch is a field effect transistor.

6. The power rate enhancement circuit as claimed in claim 1, wherein the RF switch is a diode.

7. A power rate enhancement circuit for a power amplifier in a dual mode mobile phone including an RF power amplifier for amplifying an RF input signal, a duplexer connected to an antenna, and an isolator connected to the duplexer, the circuit comprising:

5 an inductor connected between an output end of the RF amplifier and the isolator, for matching an output impedance of the RF power amplifier in a CDMA mode of operation;

10 a capacitor connected between an RF switch and a contact point formed between the inductor and the isolator, for matching the output impedance of the RF power amplifier in an AMPS mode of operation; and

15 the RF switch for selecting one of the inductor or the capacitor, according to a mode control signal.

8. The power rate enhancement circuit as claimed in claim 7, wherein the RF switch is a mechanical switch.

20 9. The power rate enhancement circuit as claimed in claim 7, wherein the RF switch is a field effect transistor.

10. The power rate enhancement circuit as claimed in claim 7, wherein the RF switch is a diode.